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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/562,610	05/27/2006	Thomas Lewin	1832	4576
20676	7590	12/28/2007		
ALFRED J MANGELS 4729 CORNELL ROAD CINCINNATI, OH 452412433			EXAMINER FUQUA, SHAWNTINA T	
			ART UNIT 3742	PAPER NUMBER
			MAIL DATE 12/28/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/562,610	Applicant(s) LEWIN, THOMAS	
	Examiner Shawntina Fuqua	Art Unit 3742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 December 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>12/23/05</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admitted prior art in view of Makris et al (US5473141) and Magnusson et al (US4392052).

Applicant's admitted prior art discloses a method and apparatus for supporting vertically hanging electrical resistance element in a furnace wherein each resistance element includes a plurality of current conducting legs that extend upwardly and downwardly, providing a plurality of ceramic support discs with a plurality of through holes, and parts of the two resistance element legs merge with terminals, and vertically supporting the resistance elements by an uppermost ceramic support disc (specification, page 1, paragraph 2 – page 3, paragraph 3). Applicant's admitted prior art does not disclose legs formed of FeCrAl, ceramic support discs formed of alumina, silicon oxide or mixtures thereof, positioning the ceramic support discs at two levels, positioning two of ceramic support discs within furnace insulation wherein the insulation is located in the roof of the furnace. Makris et al discloses legs formed of FeCrAl (column 3, lines 44-45), ceramic support discs formed of alumina, silicon oxide or mixtures thereof (column 4, lines 63-67), positioning the ceramic support discs at two levels (42, 43, 55, 56), and Magnusson et al (US4392052) discloses positioning two of ceramic support discs (4A, 4B, column 3, lines 16-35) within furnace insulation (column 1, lines 7-13). It would have been obvious to one of

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ordinary skill in the art at the time the invention was made to have included the FeCrAl current conducting legs, ceramic support discs formed of alumina, silicon oxide or mixtures thereof, positioning the ceramic support discs at two levels of Makris et al along with positioning two of ceramic support discs within furnace insulation as disclosed by Magnusson et al in the method and apparatus of Applicant's admitted prior art because, FeCrAl current conducting legs, ceramic support discs formed of alumina, silicon oxide or mixtures thereof, positioning the ceramic support discs at two levels and positioning two of ceramic support discs within furnace insulation eliminates failure and short circuiting of heatings legs. While neither Applicant's admitted prior art, Makris et al or Magnusson et al discloses positioning the two uppermost ceramic support discs and insulation in the roof of the furnace, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included this feature because the uppermost discs support the weight of the resistance elements which typically hang vertically from the roof of the furnace and would be supported more securely if the insulation was put in the roof of the furnace.

Conclusion

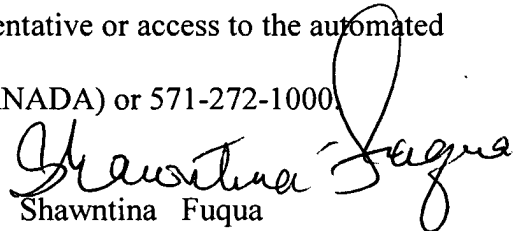
3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shawntina Fuqua whose telephone number is (571) 272-4779. The examiner can normally be reached on Monday-Friday 8-4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tu Hoang can be reached on (571) 272-4780. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

stf
December 23, 2007


Shawntina Fuqua
Examiner
Art Unit 3742